

Original on
20/9/11

Stortwich Rural District Council
2/9/42.

Sir, Report on milk & water borne outbreak
of Paratyphoid B. 1941

I think you will be specially interested in
the account of the Paratyphoid B outbreak
& in the estimation of the dilution factor
described in the Sanitary Inspector's section of the
report, & I would like to draw special attention to:-

1. Potential dangers of raw-water supplies
under war-time conditions
2. The importance of a primary planning cooperation

The carrying out of the extensive
works by Government Depts with little or no

(REGIMITE)
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2,500M 12/239 PHD
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Knowledge of local conditions & without
prior consultation with the local Authority must
inevitably have unfortunate results. Our
Paratyphoid Outbreak provides an example
of such result. Unless this tendency
on the part of the Dept is nipped in the bud
it seems certain that Enteric infection in
connection with milk from ram-supplied
producers will be on the increase.

Yours faithfully
(Sgt.) S. Chalmers Parry
Acting M.O. H

REPORT

FOR THE YEAR ENDING 31st DECEMBER, 1941.

TO THE DROITWICH RURAL DISTRICT COUNCIL.

MR CHAIRMAN AND GENTLEMEN,

I beg to submit the Annual Report for the year ending 31st December, 1941.

This Report is prepared on the lines indicated in Circular 2604 which was issued by the Ministry of Health in March, 1942.

SECTION A.

STATISTICS AND SOCIAL CONDITIONS OF THE AREA.

Area (in acres)	51,453
Number of inhabited houses (end of 1941) according to	
Rate Books	3708
Raeable value	£65,128
Sum represented by One Penny Rate	£271/14/10

The District is mainly agricultural, although a number of workers at the Salt Union Works, Stoke Works, resides within the area.

The following are extracts from the vital statistics for the year :—

Birth-rate per 1000 of Estimated Population (mid-1941)	15.3
Still birth-rate per 1000 total (live and still) births	26
Death-rate per 1000 of the estimated average Population	12.7
Death-rate from other Maternal Causes per 1000 total (live and still) births	10.2
Death-rate of infants under one year of age :	
All infants per 1000 live births	59.1
Legitimate infants per 1000 legitimate live births	62.2
Illegitimate infants per 1000 illegitimate live births	—
Deaths from Cancer (all ages)	19
" " Measles (all ages)	1
" " Whooping Cough (all ages)	3
" " Diarrhoea (under 2 years of age)	—

SECTION B.

GENERAL PROVISION OF HEALTH SERVICES FOR THE AREA.

Public Health Officers of the Authority.

(a) *Medical.* During the year I have continued to carry out the duties of Medical Officer of Health temporarily in an acting capacity for Dr. A. B. Follows.

(b) *Others.* In April, Mr. William Pembleton, Cert.S.I.B., was appointed as Additional Sanitary Inspector and Building Surveyor, and in July he took over the position of temporary acting Sanitary Inspector and Building Surveyor following the resignation of Mr. Oswald Sharpe.

An attempt is still being made to carry on the work of the Public Health Department without filling the vacancy caused by Mr. J. Taylor, who was granted leave of absence in order to join the R.A.M.C. in January, 1940.

There have been no changes in the services provided by the Laboratory, Ambulance, Nursing, Clinics and Hospitals, which continue to be satisfactory.

SECTION C.

SANITARY CIRCUMSTANCES OF THE AREA.

1. (i) **Water.** During the year 26 properties in the Parish of North Claines have been connected with the main water supply from Worcester City, and the scheme is still proving to be satisfactory both as regards quality and quantity. All cases of minor contamination of wells arising in the district have been remedied.

(ii) **Drainage and Sewerage.** The Fernhill Heath Sewerage Scheme has continued to operate effectively and a number of additional properties has been connected to this system during the year. Samples of effluent, taken from these works during the year, proved satisfactory.

2. **Rivers and Streams.** Pollution of streams occurred in one of the Parishes owing to the discharge of sewage effluents from a Site. Co-operation took place between the Public Health Officers of the County Council and the Local Sanitary Authority on the one hand and the non-civilian authority concerned on the other hand. Advice was sought from the Ministry of Health in order to ensure that, in the circumstances, all necessary precautions had been taken.

3. (i) **Closet Accommodation.** The putting into operation of the scheme for the conversion of closets from the conservancy system to the water-carriage system within the area of the Fernhill Heath Sewerage Scheme has been postponed indefinitely owing to difficulty in obtaining materials under war-time conditions.

(ii) **Public Cleansing.** Salvage operations were continued during the year and efforts were made to improve the scope and efficiency of the collection of salvage materials. Paper, scrap metals, rags, bones and bottles were among the materials salvaged and, compared with last year, the result showed a great improvement. With regard to the collection of house refuse, the whole scheme was re-organised in August in order to establish and maintain a system which would be as efficient and economical as possible with the existing shortage of transport and labour resulting from war-time conditions.

(iii) **Sanitary Inspection of the Area.** The report of the Sanitary Inspector, dealing with the work carried out during the year, is attached.

(iv) **Shops.** No action was taken under the Shops Act, 1934, during the year.

(v) **Camping Sites.** Although there was no alteration made as regards the licensing of camping sites, camping was on a smaller scale than usual owing to the war.

(vi) **Smoke Abatement.** It was not found necessary to take any action during the year.

(vii) **Swimming Baths and Pools.** The only swimming bath in the area is privately owned, and this remained closed to the public during the year.

(viii) **Eradication of Bed Bugs, etc.** One house, infested with a rare beetle of the Dermestidae family, was fumigated throughout with hydrocyanic acid gas. The result was satisfactory and no recurrence has been reported.

4. **Schools.** During the year the well water supplies at Hanbury School and the Hartlebury Council School were sampled and pronounced fit for drinking.

The drainage system at Hanbury School was found to require overhauling generally, and all necessary work was carried out.

Otherwise the sanitary conditions and water supply at the various schools have been satisfactory.

SECTION D.

HOUSING.

1. Inspection of Dwelling-houses during the year.

(a) Total number of dwelling-houses inspected for housing defects (under Public Health or Housing Acts)	141
and number of inspections made for the purpose	159
(b) Number of dwelling-houses (included above) which were inspected and recorded under the Housing (Consolidated) Regulations, 1925 and 1932	5
and number of inspections made for the purpose	5
(c) Number of dwelling-houses found to be in a state so dangerous or injurious to health as to be unfit for human habitation	3
(d) Number of dwelling-houses (exclusive of those referred to under the preceding sub-head) found not to be in all respects reasonably fit for human habitation	135

2. Remedy of defects without service of formal Notices.

Number of defective dwelling-houses rendered fit in consequence of informal action by the Local Authority or their officers	123
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3. Action under Statutory Powers.

(a) *Proceedings under Sections 9, 10 and 16 of the Housing Act, 1936.*

(1) Number of dwelling-houses in respect of which Notices were served requiring repairs (or defects remedied)	Nil.
(2) Number of dwelling-houses which were rendered fit after service of formal notices :—	
(a) By owners	1
(b) By Local Authority in default of owners	Nil.

(b) *Proceedings under Public Health Acts.*

(1) Number of dwelling-houses in respect of which notices were served requiring defects to be remedied	Nil.
(2) Number of dwelling-houses in which defects were remedied after service of formal notices :—	

- | | |
|--|------|
| (a) by the Owner | Nil. |
| (b) by Local Authority in default of owner | Nil. |
- (c) *Proceedings under Sections 11 and 13 of Housing Act, 1936.*
- | | |
|---|------|
| (1) Number of dwelling-houses in respect of which Demolition Orders were made | Nil. |
| (2) Number of dwelling-houses demolished in pursuance of Demolition Orders | 4 |
- (d) *Proceedings under Section 12 Housing Act, 1936.*
- | | |
|---|------|
| (1) Number of separate tenements or underground rooms in respect of which Closing Orders were made | Nil. |
| (2) Number of separate tenements or underground rooms in respect of which Closing Orders were determined, the tenement or room having been rendered fit | Nil. |

4. Housing Act, 1936, Part IV. Overcrowding.

No records are available regarding the state of overcrowding; but it is felt on the whole that the general position, brought about by war-time conditions, has not deteriorated during the year, although there are still numbers of evacuees, both official and unofficial, resident in the area.

Individual cases of overcrowding have been abated, but it has only been possible to deal effectively with the worst cases as there is no alternative accommodation in the district.

SECTION E.

INSPECTION AND SUPERVISION OF FOOD.

(a) **Milk Supply.** Milk Producers' premises have been visited during the year and the samples, taken for bacteriological examination, have proved satisfactory.

(b) **Meat and other Foods.** Since the outbreak of war, slaughtering has been discontinued in the four licensed slaughter-houses.

(c) **Adulterations., etc.** I am indebted to Mr. E. A. Spencer, Chief Inspector of Weights and Measures, for the information that 6 samples of milk, taken in this district during the year under the Food and Drugs Act, 1938, were satisfactory.

(d) **Chemical and Bacteriological Examination of Food.** This work is carried out by the County Analyst and Bacteriologist at the County Laboratory, Worcester.

SECTION F.

PREVALENCE OF, AND CONTROL OVER, INFECTIOUS DISEASES.

Diphtheria Immunisation.

During the year, the diphtheria immunisation campaign, commenced in Ombersley and Sytchampton, was continued in the remaining parishes and a further 1227 children completed their course of injections.

The numbers of children immunised were as follows :—

(a) Pre-school children	....	301
(b) School children	....	926
		—
Total	....	1227
		—

The diphtheria prophylactic used was A.P.T., which had been supplied by the Ministry of Health.

The important part played, not only by the general practitioners and school teachers but also by the health visitors and district nurses, in connection with immunisation propaganda cannot be over-emphasised, and I wish to express my grateful thanks for their energetic co-operation in securing consents from the parents.

Notifiable Diseases.

With the exception of measles and paratyphoid fever, there has been no appreciable change in the incidence of infectious disease in comparison with last year's figures.

Particulars of cases of infectious disease, which occurred during the course of the year, are shown in the following table :—

Disease.	Total cases notified.	Cases Admitted to hospital.	Total Deaths
Scarlet Fever	38	34	—
Diphtheria	16	16	—
Puerperal Fever	2	—	—
Primary Pneumonia	5	1	—
Erysipelas	2	—	—
Cerebro-spinal Fever	4	4	1
Measles	230	1	1
Whooping Cough	19	—	3
Ophthalmia Neonatorum	1	—	—
Food Poisoning	3	3	—
Paratyphoid Fever	16	16	1

An analysis of the total notified cases, according to age groups, is given below :—

Age Group.	Scarlet Fever.	Diphtheria	Puerperal Fever.	Pneumonia.	Cerebro-spinal Fever.	Measles.	Whooping Cough.	Paratyphoid Fever.	Ophthalmia Neonatorum.	Food Poisoning.	Erysipelas
Under 1 year	—	—	—	—	—	3	1	1	1	—	—
1—2	1	—	—	—	1	17	3	—	—	—	—
2—3	1	—	—	—	—	21	6	2	—	—	—
3—4	1	—	—	—	—	17	2	—	—	—	—
4—5	3	—	—	—	—	15	1	1	—	—	—
5—10	15	—	—	1	2	107	4	2	—	—	—
10—15	10	—	—	—	—	35	2	1	—	—	—
15—20	2	—	—	1	—	7	—	—	—	—	—
20—35	3	—	2	—	—	6	—	6	—	—	1
35—45	—	—	—	1	1	—	—	—	—	—	1
45—65	1	—	—	2	—	1	—	3	—	—	—
Over 65 years	1	—	—	—	—	1	—	—	—	—	—

PARATYPHOID B. FEVER A small circumscribed outbreak of paratyphoid B. fever, partly milk-and partly water-borne, occurred in the district during the months of June and July. It comprised a total of 17 primary and secondary cases (14 of

which were resident in this district); and it is of peculiar interest owing to the extreme rarity of paratyphoid B. epidemics in which the organism has been recovered from *water*.

The machine-milker at a bottling establishment proved to be a mild case; and his son, who eight days previously had been admitted to hospital suffering from gastro-intestinal symptoms, was later diagnosed as a paratyphoid B. infection.

This farm received milk from six local producers as well as its own; and, while paratyphoid B. organisms were absent in all milk samples submitted for examination, they were reported to be present in the ram-water which was used for dairying purposes.

One of the sources of the ram-water—2 miles up stream—was traced to a sewage effluent from a Site which incidentally took its milk supply from this farm. Some of the paratyphoid B. organisms, originally discharged from the Site in the sewage effluent, evidently completed their circular tour in the suspected milk supply and five cases of paratyphoid B. fever (one of whom was a canteen cook) were notified among its employees. The fact that no raw milk was served over the counter at the canteens accounts for the negligible number of cases at the Site.

A complete survey was made of farms and dwellings situated along the course of streams receiving effluents from the Site.

Paratyphoid B. organisms isolated from two patients, from sewage effluent at the Site and from ram-water at the farm, were reported to belong to the same phage type. The outbreak was due to a combination of factors, the chief predisposing causes being:

- (1) Recent incidence of paratyphoid fever in surrounding districts.
- (2) Inadequate dilution of the effluent from one of the sewage works at the Site.

As a matter of interest, the dilution factor was estimated experimentally at a point in the stream below the last tributary and above the position of the ram-intake; and it was found that the effluent was diluted by slightly less than *three* times its volume along its course to the hydraulic ram.

- (3) Comparative proximity of hydraulic ram which is situated about two miles below the outfall.
- (4) Hot spell and drought for previous six weeks.

The investigation illustrates two important facts :

I. Potential dangers of ram-water supplies under war-time conditions.

Sewage effluents must find some outlet for discharge ; and in rural districts brooks may be regarded as their natural course. The potential risk run by persons using hydraulic ram-water for domestic purposes must therefore be apparent—even though it may not be very significant.

However, when an individual happens to be a food-handler, the health of a community may be endangered. Every farmer, therefore, making use of a ram-water supply for cleansing the cowsheds and dairy, must regard this water as potentially dangerous—for brook water is liable at any time to pollution.

Ram-water really consists of a mixture of samples collected from a brook over a continuous period.

Any sample, taken direct from a contaminated brook, may contain no harmful organisms, whereas a specimen of ram-water from the same brook is more likely to do so, for it is an accumulation of an infinite number of samples.

This fact is pointed out as it is not generally realised that ram-water is even more unsafe than brook water *per se*.

All users of ram-water should therefore take warning of the dangers of ram-supplies—especially under war-time conditions.

II. The importance of a primary planning co-operation.

Any Engineers, over whom Sanitary Authorities have no control, should co-operate with them at the time of planning their sewage works.

I am very grateful to Dr. Wyndham Parker for his valued advice on all matters concerning this outbreak. Thanks are also due to Mr. R. W. T. Owen, County Sanitary Officer, for his indispensable support in carrying out the investigations ; and to Mr. H. E. Monk, County Analyst and Bacteriologist and his staff for their enthusiastic co-operation.

I am also indebted to Mr. D. Johnston Green for valuable legal advice, and to Mr. W. Pembleton who had only just taken up his new appointment as Sanitary Inspector before the epidemic. I wish to express my appreciation of the excellent and arduous work done by him and Mr. Ilsley.

Finally I wish to thank my medical colleagues for taking such prompt action to establish an early diagnosis in suspected cases.

Tuberculosis. The following table gives particulars of new cases of tuberculosis and deaths from the disease in the area during the year :—

Age Periods.	<i>New Cases.</i>				<i>Deaths.</i>			
	Respiratory.		Non-Respiratory.		Respiratory.		Non-Respiratory.	
	M.	F.	M.	F.	M.	F.	M.	F.
0—	—	—	—	—	—	—	—	—
1—	—	—	1	—	—	—	1	—
5—	—	—	—	—	—	—	—	—
15—	1	3	1	—	—	2	—	—
25—	2	4	—	—	1	1	—	—
35—	1	1	—	—	—	—	—	—
45—	1	—	—	—	—	—	—	—
55—	—	1	—	—	—	—	—	—
65 and over	—	—	—	—	—	—	—	—
Totals	5	9	2	—	1	3	1	—

No action was taken in 1941 under the Public Health (Prevention of Tuberculosis) Regulations, 1925 (relating to persons suffering from pulmonary tuberculosis employed in the milk trade) or under Section 172 of the Public Health Act, 1936, (relating to the compulsory removal to hospital of persons suffering from tuberculosis).

My thanks are due to Mr. William Penbleton, the Sanitary Inspector, and to the staff for the help they have given me in compiling this Report.

I am, Gentlemen,

Your obedient Servant,

S. CHALMERS PARRY,

Acting Medical Officer of Health.

June, 1942.

ANNUAL REPORT OF THE SANITARY INSPECTOR FOR THE YEAR 1941.

HEALTH DEPARTMENT,

RURAL COUNCIL OFFICES,

DROITWICH.

JUNE, 1942.

TO THE CHAIRMAN AND MEMBERS OF THE
DROITWICH RURAL DISTRICT COUNCIL.

MR. CHAIRMAN AND GENTLEMEN,

I beg to submit my First Annual Report on the Sanitary Administration of the district for the year ending 31st December, 1941.

The year under review includes several months when my predecessor, Mr. Oswald Sharpe, was in charge of the department. I was appointed as Additional Inspector in April, 1941, and took over the duties of Sanitary Inspector and Building Surveyor on the resignation of Mr. Sharpe at the end of June.

The work of the Department has been carried on under difficult war-time conditions with a reduced staff and no qualified assistant.

Evacuation work was taken over by another Department during the year, and also Civil Defence administration with the exception of such duties as Decontamination of Foodstuffs, Repair of War Damage, etc.

Matters of outstanding interest during the year have been the outbreak of Paratyphoid Fever and the re-organisation of the Salvage and Refuse Collection systems. Both are dealt with in detail elsewhere in this Report.

This Report has been made as brief as possible, as under existing conditions it is difficult to find sufficient time to review and report adequately upon past periods of work. It has also been prepared in conformity with Circular 2604 of the Ministry of Health.

INFECTIOUS DISEASES.

The following table shows the number of cases of infectious diseases notified during the year, and the parishes in which they occurred:—

Parish.	Scarlet Fever.	Diph- theria.	Puer- peral Fever.	Pneu- monia.	Ery- sipelas	Cere- bro- Spinal Fever	Meas- les.	Whoop- ing Cough.	Para- typhoid Fever.	Oph- thalmia Neona- torum.	Food Pois- oning.
N. Claines	4	1	2	2	—	1	11	—	—	—	—
Crowle	—	—	—	—	—	—	—	—	—	—	—
Doddlehill	4	—	—	1	—	1	38	2	—	—	—
Doverdale	—	—	—	—	—	—	—	—	—	—	—
Elmbridge	1	—	—	—	—	—	21	—	—	—	—
Elmley	—	—	—	—	—	—	—	—	—	—	—
Lovett	—	—	—	—	—	—	19	3	—	—	—
Hadzor	5	—	—	—	—	1	5	—	—	—	—
Hampton	—	—	—	—	—	—	—	—	—	—	—
Lovett	—	—	—	—	—	—	16	3	—	—	—
Hanbury	7	1	—	—	—	—	25	1	—	—	—
Hartlebury	4	2	—	1	—	1	19	3	—	—	—
Himbleton	—	—	—	—	—	—	3	—	—	—	—
Hindlip	1	—	—	1	1	—	9	—	—	—	—
Huddington	1	—	—	—	—	—	1	—	—	—	—
Martin	—	—	—	—	—	—	—	—	—	—	—
Hussingtree	1	—	—	—	—	—	—	—	—	—	—
Oddingley	1	—	—	—	—	—	1	—	—	1	—
Ombersley	2	11	—	—	—	—	15	—	—	—	3
St. Martin's (County)	—	—	—	—	—	—	—	—	—	—	—
Salwarpe	2	—	—	—	—	—	20	—	—	—	—
Stock and Bradley	—	—	—	—	—	—	11	—	—	—	—
Tibberton	4	—	—	—	—	—	3	—	—	—	—
Upton Warren	1	—	—	—	1	—	12	7	—	—	—
Warndon	—	1	—	—	—	—	1	—	—	—	—
Westwood	—	—	—	—	—	—	—	—	—	—	—
Totals	38	16	2	5	2	4	230	19	16	1	3

It will be noted that 16 cases of paratyphoid fever occurred in the district. Two of these cases were not connected with the epidemic. The remaining 14 were concerned in an outbreak which totalled 17 cases, three of which were resident outside the Rural District. A detailed account of this outbreak is given earlier in the Report by Dr. Parry, and it only remains for me to comment on the terrific amount of both field work and office work thrown on the staff for a considerable period.

Indicative of this it is interesting to note that 33 samples of water and 10 samples of milk were submitted to the County Analyst in connection with the outbreak.

Since the epidemic some interesting field work has been carried out in connection with (1) the speed of flow of the stream concerned and (2) the dilution of the effluent from the sewage works at the Site in its flow to the point from which

the ram-water supply to the farm was taken. It was found that at the culvert containing the effluent the velocity of flow was approximately 1 foot per second and the volume of flow 3.8 gallons per second. Near the point on the stream where the ram-water supply was taken off, the velocity was found to be 0.53 ft. per second, and the flow 14.9 gallons per second. This gives a figure for dilution of the effluent between the two points of approximately 1 part effluent to 3 parts stream water (i.e. 1 in 4) ,a surprisingly low figure.

The time taken for coloured effluent water to travel from the culvert to the ram intake was approximately $5\frac{3}{4}$ hours, and to the supply tank at the farm approximately $6\frac{1}{2}$ hours. This gave an average velocity of the stream of 0.45 ft. per second. These investigations were important as showing (1) the extremely low dilution factor of the sewage effluent from the site by the stream water and (2) the comparatively short length of time taken by any organism in its passage from the outfall of the sewage works to the hydraulic ram on the stream and, more important still, to the supply tank at the farm.

Disinfection after removal of scheduled infectious disease cases to hospital, or after recovery, is carried out as a routine. Disinfectants are supplied and instructions given as to measures to be taken, and the schools and health visitors are informed as to children to be excluded. Full investigation is made of all cases of the more serious infectious diseases and any necessary action taken.

SANITARY CIRCUMSTANCES.

Water Supply.

During the year a further 26 properties in the Parish of North Claines were given a supply from the Council's water mains, and a total of 448 properties were receiving a supply from the Council's system by the end of the year. The water is purchased in bulk from the City of Worcester and distributed by the Council through its own mains.

The work of supervising the water supply system is carried out by the Health Department, and during the period considerable headway was made with equipping the water supply department for meeting all contingencies in the way of burst mains and other defects liable to occur.

In the parishes of Dodderhill and Upton Warren the water mains of the East Worcestershire Waterworks Co. are available. The remainder of the district relies upon wells for its water supply, and unfit well supplies are dealt with as they are discovered.

The following summarises water supply matters dealt with during the year:—

No. of wells cleansed and repaired	....	....	....	15
No. of wells closed or supplies stopped	....	....	....	7
No. of premises supplied from waterworks	....	....	....	26
No. of samples submitted for analysis	....	....	....	51
No. of premises with contaminated or deficient water supplies dealt with	....	....	....	26

Drainage, Sewerage and Sewage Disposal.

The sewerage and sewage disposal works owned by the Council have received regular supervision throughout the year and have worked satisfactorily.

The Fernhill Heath Outfall Works have continued to function effectively and satisfactory effluents have been obtained. A certain number of properties have been connected to the sewers in the Fernhill Heath area during the year, though the war has had the effect of bringing this work almost to a standstill.

Some trouble was experienced with the disposal system at Cutnall Green owing to waterlogging of the surrounding land. The system was repaired, overhauled and to some extent amended, and is now operating efficiently.

The drainage arrangements at a number of establishments have been investigated during the period and in several cases owners have installed new disposal systems. In this way some bad cases of pollution of watercourses by sewage effluents have been obviated.

At Wychbold the drainage system on the main road was found to be defective and there was some danger of pollution of the water main nearby. The defects were remedied by the County Surveyor's Department in consultation with this Department, and appropriate measures taken with regard to the possible contamination of the main.

Rivers and Streams.

As noted above, several cases of pollution of streams by sewage effluents have been dealt with.

One case occurred in which certain streams were polluted by the discharge of sewage effluents from a large site in the area. This was connected with the outbreak of Paratyphoid B. Fever, reported upon elsewhere, and was dealt with in co-operation with the County Council, and after consultation with the Ministry of Health.

Closet Accommodation.

The position with regard to closet accommodation has varied little during the year. A number of properties have been connected to the sewers in the Fernhill Heath district, and closets converted to the water carriage system, but the general conversion scheme is in abeyance owing to the war.

Public Cleansing and Salvage.

The collection of house refuse continued to cause some anxiety, especially in the early part of the year when trouble was experienced with regard to the hiring of vehicles. The service, together with the salvage collection system, was completely re-organised in August, and certainly gave much better results in the latter part of the year, though actually less transport and labour were available towards the end of the year than previously. Before the re-organisation, one lorry was employed full time on house-to-house collection of salvage materials, with two women acting as loaders, but owing to the scattered nature of the district and its large area it was found impossible to cover the district effectively, and the quantities of materials salvaged were disappointingly low. In August this system was completely dropped and the active co-operation of the Women's Voluntary Services sought. Meetings were held and a scheme evolved whereby salvage depots were set up in all parts of the district to which householders were to be encouraged to bring their salvage, and to which, where necessary, the representatives of the Women's Voluntary Services would themselves collect the salvage. These depots were cleared by the Council's vehicle each month and the materials taken to the Central Depot for sorting, baling and despatching. A trailer was purchased by the Council for use with the private cars of the lady volunteers, and the Council also supplied sacks and dustbins and replaced any petrol used by the ladies in this work. A large sorting, baling and storage shed was erected at the Council's Central Depot, Fernhill Heath, to facilitate dealing with the salvage at that end.

This scheme, although requiring constant attention in its organisation, has been increasingly successful from its start, and at the time of writing this Report is still showing better results month by month.

Great praise must be given to all the ladies who have worked so keenly without reward, and without whose willing co-operation the scheme could not have functioned, and I would especially thank Mrs. Lamb, of Lincomb Hall, Hartlebury, for her never-flagging enthusiasm and for all the help she has given in the inauguration and organisation of the system.

A scheme is also in operation whereby the schools in the district collect waste paper, etc., and receive 25 per cent of the value of the same for devotion to any cause connected with the schools. This paper is collected at approximately monthly intervals.

The Hartlebury Boy Scouts had also collected and themselves disposed of nearly 30 tons of waste paper and scrap iron before the end of the year, a very fine effort.

With regard to refuse collection it is realised that for the duration of the war salvage work is of major importance and must take precedence, but it has been endeavoured to maintain a reasonable service under war-time difficulties.

The following summarises this work as it is done under the revised schedule operated from August, 1941 :—

No. of houses from which refuse is removed	....	3632
No. of privies cleansed	....	260
No. of ashpits cleansed	....	180
No. of houses from which refuse is removed :		
(a) At fortnightly intervals	....	750
(b) At monthly intervals	....	1496
(c) At 2-monthly or quarterly intervals	....	1386

The following tables give interesting figures with regard to salvage :—

(a) *Total amounts collected and sold during the year 1941 :*

				Weight			Value.		
				T.	C.	Q.	£	s.	d.
Paper (all classes)	....	....	....	41	4	1	211	7	2
Ferrous Metals	....	....	....	31	10	2	59	5	9
Non-ferrous Metals	....	....	....	0	11	0	6	15	10
Tins	....	....	....	1	19	3	1	19	9
Rags and other textiles	....	....	....	3	0	2	23	2	9
Bottles and Jars	....	....	....	0	15	0	3	16	10
Bones	....	....	....	1	15	0	5	5	9
				<hr/>			<hr/>		
				80	16	0	£311	13	10
				<hr/>			<hr/>		

(b) *Monthly Sales Figures, 1941 :*

				<i>Weight.</i>			<i>Value.</i>			<i>Weight.</i>				<i>Value.</i>			
				T.	C.	Q.	£	s.	d.	T.	C.	Q.	£	s.	d.		
January	....	....	....	0	5	0	1	18	0								
February	....	....	....	<hr/>			<hr/>							
March	....	....	....	4	11	0	22	16	6								
April	....	....	....	5	13	1	24	14	5								
May	....	....	....	17	15	0	39	10	7								
June	....	....	....	3	8	0	9	10	2								
										<hr/>							
Total for 6 months										31 12 1						£98 9 8	
July	....	....	....	11	9	1	42	16	10								
August	....	....	....	3	13	2	9	9	8								
September	....	....	....	7	13	0	33	2	2								
October	....	....	....	12	17	0	51	17	5								
November	....	....	....	5	2	2	28	19	6								
December	....	....	....	8	8	2	46	18	7								
										<hr/>							
Total for 6 months										49 3 3						£213 4 2	
Total for year 1941										80 16 0						£311 13 10	
Total for year 1940										40 8 3						£139 0 0	

Sanitary Inspection. The following table summarises general work carried out during the period under review, under the Public Health and Housing Acts:—

No. of dwelling-houses inspected for housing defects	141
No. of dwelling-houses found unfit for habitation	3
No. of dwelling-houses found to be not in all respects fit for habitation	135
No. of defective dwelling-houses rendered fit after informal action	123
No. of defective dwelling-houses rendered fit after formal action	1
No. of dwelling-houses in respect of which Demolition Orders were made	—
No. of dwelling-houses demolished in pursuance of Demolition Orders	4
No. of overcrowded houses dealt with	8
Drains laid or relaid	29
Drains trapped, ventilated or repaired	19
New drainage systems installed	11
Obstructed drains dealt with....	26
Defective drainage dealt with	29
Drains inspected	97
Defective or insanitary cesspools dealt with	17
Insanitary closets, sinks, etc., rectified	7
No. of privy or pail conversions and additional water-closets provided	12
Ditches, etc., cleaned out	11
Pollution of watercourses remedied	12
Offensive accumulations removed	4
Keeping of animals dealt with	3
Infested premises dealt with	2
Dirty premises dealt with	3
General defects dealt with	74
Defective sanitary conveniences (Factories) dealt with	4

Disinfestation. No cases of bed bug infestation were reported or detected during the year. One interesting case occurred in which a large house was infested with a rare insect thought to be of the dermestidae family, somewhat similar in size and shape to the bed bug. The source of the infestation was unknown.

The owner was put into touch with a firm of fumigating experts who fumigated throughout with hydrocyanic acid gas.

No further trouble has been reported.

Rats and Mice Destruction. So far as is known, no serious rat infestation exists in the district and very few complaints have been received by the department.

During the year trouble was experienced at the Council's two refuse tips at Wychbold and Battleton Common, and the Rat Officer of the Worcestershire War Agricultural Executive Committee was asked to undertake the work of keeping these tips free from rats.

Camping Sites. No further licences for the use of land for camping were issued during the year.

Camping was again much reduced owing to war-time conditions, though at holiday periods the sites were fairly well occupied. The sites were inspected at these times and were in general conducted satisfactorily.

During the summer a students' camp was organised by the War Agricultural Committee in the Holt Fleet district to enable the students to help on the neighbouring farms in their vacation. This camp was inspected regularly and was well conducted.

A caravan and shed occupied by two families of gipsies, on land not licensed for use as a camping site and unsuitable for such use, were removed after informal action by the department.

Another case was dealt with in which caravans were being used on an unlicensed site in the occupation of a firm of contractors. A hostel was built and the caravans were eventually removed.

Several other cases of unlicensed camping have been dealt with during the year without recourse to statutory action.

HOUSING.

Statutory housing work has been largely in abeyance since the outbreak of war, but general housing defects are still dealt with as they are encountered. The table in the Medical Officer's section of the Report gives details of housing work carried out in the period.

The erection of new houses is practically at a standstill, only six houses being completed during the year, and a serious shortage of accommodation is making itself felt.

Endeavours have been made in several instances to find other accommodation for families living in condemned and extremely insanitary houses, but without avail.

OVERCROWDING.

No exact figures are available with regard to overcrowding in the district during 1941, though it is felt that the position is at any rate not worse than during the year 1940.

Eight cases of overcrowding were dealt with during the period under review.

HOUSING (RURAL WORKERS) ACTS.

The reconditioning of properties under these Acts is in abeyance owing to the war.

Work on one cottage dealt with under the Acts was completed during the year.

HOUSES OWNED BY THE LOCAL AUTHORITY.

No houses were erected by the Council during the year.

The following is a summary of houses owned by the Council :—

N. CLAINES.	Station Road, Fernhill Heath	6
	Dilmore Lane, Fernhill Heath	10
CROWLE.	Turnpike Road, Crowle	6
	Lower Crowle	2
DODDERHILL.	Worcester Road, Wychbold	6
	Chequers Lane, Wychbold	10
ELMBRIDGE.	Broad Common	4

HARTLEBURY.	Worcester Road, Hartlebury	12
	Torton, Hartlebury	6
OMBERSLEY.	Hay Lane	4
	Lineholt—Old and New	12
	Holt Fleet	6
TIBBERTON.	Old Turnpike	4
UPTON WARREN.	....	10
		—
		98
		—

These properties are kept in repair by the Department, and the drainage arrangements received periodic attention during the year.

NEW BUILDINGS.

The amount of new development has again been very small owing to war conditions.

Plans for 13 new buildings were deposited and dealt with during the year, and also 10 temporary buildings were given approval for a further period of 3 years.

Only six houses were erected and completed during the period.

INSPECTION AND SUPERVISION OF FOOD.

(a) **Milk Supply.** The following shows the numbers of retailers, producers and farms on the registers at the end of the year :—

No. of Registered Retailers of Milk	....	....	79
No. of Registered Producers	....	....	169
No. of Registered Dairy Farms	....	....	174

The County Council issued three production and bottling licences and 31 production licences for "Accredited" and "Tuberculin Tested" Milks under the Milk (Special Designations) Orders 1936 and 1938, to producers within the Rural District on 1st January, 1941.

These totalled approximately 15 per cent of the licences issued for these Milks in the whole County. During the year one new licence for "Tuberculin Tested" Milk and two new licences for "Accredited" Milk were issued, and one licence for "Accredited" Milk was cancelled.

144 satisfactory samples of Graded Milks were taken by the County Council from producers within the Rural District, and eleven unsatisfactory samples, all of "Accredited" Milk.

The following licences were issued by this Council during the year under the Milk (Special Designations) Orders, 1936 and 1938 :—

Two licences to "Pasteurise" Milk.

One licence to bottle "Accredited" Milk.

One licence to bottle "Tuberculin-Tested" Milk.

Two supplementary licences for the sale of "Pasteurised" Milk in the district.

Milk Producers' premises were visited during the year, and in a number of instances improvements were effected so far as was possible under the conditions now obtaining.

(b) **Meat and Other Foods: Slaughterhouses.** Since the outbreak of war no slaughtering has been carried out in the area with the exception of animals slaughtered by private owners for their own consumption, under licence from the Ministry of Food.

Six licences were issued or renewed by the Council during the year to slaughtermen in the district, under the Slaughter of Animals Act, 1933.

The following food was condemned under the Food and Drugs Act, 1938, as being diseased or unsound and unfit for human consumption :—

38 dozen eggs.

7 $\frac{3}{4}$ lbs. bacon

Carcase of one sheep.

Twenty-four cases of salvaged evaporated milk were inspected and passed for immediate consumption in a Works Canteen.

In conclusion, I would sincerely thank the Chairman and Members of the Council, Dr. Parry, Mr. Johnston Green, and other Officials of the Council, for their support and confidence since I took office.

I would also thank the staff under my charge for their loyalty, and for their devotion to duty under the difficult conditions prevailing during war-time. Their help has been invaluable.

I am,

Your obedient Servant,

WILLIAM PEMBLETON,

Sanitary Inspector and Building Surveyor.
